United States Department of Agriculture
NRCS Natural Resources Conservation Service
Cape May Plant Materials Center
PMC NEWSLETTER FY 2007 QUARTER 4

Beneficial Conservation Plant Released by Cape May Plant Materials Center

Somerset, August 18, 2007 -- The Dune Crest Coastal Little Bluestem (Source-Identified Germplasm) is now available to commercial growers thanks to the efforts of the Cape May Plant Materials Center (PMC). Coastal Little Bluestem is useful for re-vegetating hot, dry, infertile sites, and for diversifying established sand dune plantings and Army Corps of Engineer's beach replenishment projects.

"The release of Dune Crest will increase the resources available to coastal communities to help protect shoreline areas," said Tom Drewes, State Conservationist for USDA, Natural Resources Conservation Service (NRCS) in New Jersey. The Cape May Plant Materials Center (PMC), one of twenty-six plant materials centers throughout the country, is operated by USDA, Natural Resources Conservation Service (NRCS). "The Cape May Plant Materials Center has been instrumental in helping protect our coastal resources, lives and property for more than 40 years through the development of conservation plants," Drewes said.

The PMC selects, develops, and releases plants that are best-suited for the East coast, and tests them in field trials. Breeder or foundation material of these plants is made available to the public through commercial nurseries. Other plant material releases from the Cape May PMC include 'Atlantic 'Coastal panicgrass, 'Avalon' saltmeadow cordgrass, 'Cape' American beachgrass and 'Suther' Prairie warm-season grasses. A list of plant and seed vendors is available from the PMC or the New Jersey NRCS website at http://www.nj.nrcs.usda.gov/plants.html.

The Cape May facility selects and develops conservation plant materials for the Mid- Atlantic and southern New England states which includes significant portions North Carolina, Virginia, Maryland, Delaware, New Jersey, New York (Long Island), Connecticut, Rhode Island and Massachusetts.

Learn more about the entire National Plant Materials Program by visiting:

http://plant-materials.nrcs.usda.gov/

HIGH TIDE SWITCHGRASS TESTED PLANT MATERIAL

The USDA-Natural Resources Conservation Service (NRCS), and the Rutgers University, Agricultural Experiment Station announce the naming and release of High Tide switchgrass *Panicum virgatum L.*. High Tide switchgrass has been assigned the Accession number 9094764. This release will be referred to as High Tide and is released as a tested plant materials class of certified seed.

This alternative release procedure is justified because of grower demand for a Middle Atlantic ecotype of switchgrass that has application for tidal shoreline/streambank stabilization. Currently no switchgrass releases are commercially available in the Mid-Atlantic/Northeast for this application. Grower demand is relatively high for this selection as a local ecotype switchgrass.

Description:

Switchgrass is a native, erect, coarse, warm-season perennial bunchgrass. The foliage height of High Tide averages 5-6 feet in height, the inflorescence length averages 18-inches (47 cm) and the open panicle often extends to a height of 6 to 7 feet (1.8-2.1 m). Tables 1 and 2 summarize data collected by Rutgers University on morphological characteristics of the High Tide in comparison to other releases. The low incidence of spot blotch disease and lodging in 2005 and 2006 (Table 1.) along with High Tide's low ash content make it a potentially good biofuel crop. (Table 2.)

Switchgrass has both sod and bunch-forming ecotypes. Bunch-forming ecotypes like 'Carthage' are generally encountered on uplands. In the Southeast, bunch-forming ecotypes have only short, vertically oriented rhizomes averaging 0.5 inch (1.4 cm) in length, while sod-forming ecotypes, like High Tide, have both short, vertically-oriented rhizomes and long horizontally-oriented rhizomes (2 to 4 times longer than vertical rhizomes) Switchgrass roots may reach depths of 8 feet (2.5 m) or more.

Primary Conservation Use:

This plant material is suited for streambank/shoreline stabilization in a freshwater environment as well as for herbaceous riparian buffer plantings. A few individuals from the population have exhibited some salt tolerance in a controlled salt acclimation environment at the Cape May Plant Materials Center.

Secondary Conservation Use:

Due to the amount of biomass this switchgrass produces as well as the low ash content (Table 2), it may have application as a biofuel crop. High Tide has been included in biofuel production projects in comparative studies with other switchgrass entries at Cornell University, Rutgers University, North Carolina State University, and University of Florida. Additional results will be forthcoming.

Field Day at the Cape May Plant Materials Center a Success!

The Cape May PMC was the host site for a multi-group field day. The Cape May County Beach Plum Association, Rutgers Master Gardner's, Rutgers Environmental Stewardship graduates and the Cape May County Board of Agriculture met and dined in the PMC equipment building. Approximately 75 people attended this one day event.

A hay wagon tour ride of the PMC seed production fields was enjoyed by most. The tour included interpretive stops at each production field for Cape May's 3 new plant releases which are:

Coastal Germplasm Indiangrass, Dune Crest Germplasm Coastal Little Bluestem, and High Tide Germplasm Switchgrass.

Cape May County Beach Plum Association meeting.

Wagon trains take participants on PMC tour.

NRCS Mission Statement: *"Helping People Help the Land"*

USDA NRCS National Plant Material Program

The purpose of the Plant Materials Program is to test and release plants that can help solve natural resource problems. Many plants developed by the NRCS are being used for alternatives to foreign energy sources, carbon sequestration, erosion reduction, wetland restoration, water quality improvement, streambank and riparian area protection, coastal dune stabilization, and other special conservation treatment needs. USDA NRCS scientists located at Plant Material Centers, seek out plants that show promise for meeting these and other identified conservation needs. After species are tested and proven, they are released to the private sector for commercial production. This work is carried out at twenty seven USDA NRCS Plant Material Centers located strategically throughout the United States and done cooperatively with state and Federal agencies, commercial businesses, seed and nursery associations.

The Cape May Plant Material Center has been a leader in developing new native plants and technologies for coastal, marine and estuarine habitat. To learn more about us, visit our web sites at:

http://plant-materials.nrcs.usda.gov/njpmc/

Field Offices, District Employees, Partners and Volunteers: We need your help!

The Cape May PMC serves a nine-state service area extending from Massachusetts's to the North Carolina South Carolina border. The plant developmental process used by the Cape May PMC relies heavily on cooperation conservation partners to locate native plant stands; collect materials and ship them to Cape May; locate suitable plant testing sites; record plant performance data; and *publish new scientific findings*. If you or anyone you know would like to become a partner and volunteer your talents contact us at:

'Atlantic' Coastal Panicgrass

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